



SAN DIEGO COUNTY FIRE AUTHORITY

5510 OVERLAND AVE., SUITE 250, SAN DIEGO, CA 92123 • (858) 974-5999

CUSTOMER INFORMATION VERSION

FIRE PLAN CHECK

Correction List for Residential Projects

The items listed below are commonly omitted from plans submitted for review. Advance preparation by applicants to satisfy these requirements will help expedite the plan review process. Be advised: Just as specific items on this list may not apply to specific projects, this list also does not necessarily include all requirements for all projects; other items may apply. Please use this list as a guide only.

To facilitate rechecking, please identify, next to each circled item, the sheet of the plans upon which the correction has been made.

RETURN THIS CORRECTION LIST WITH THE CORRECTED PLANS

Note: If new plans are provided when resubmitting, return at least one copy of the original stamped and checked set.

Codes are paraphrased. Citation is the primary reference. For full text see the County and California Fire and Building Codes.

A. PLAN REQUIREMENTS

1. Due to the number and/or complexity of corrections, before Fire sign-off will be given, make corrections on the originals and run new prints.
2. Name, label and specify use of all rooms.
3. Define all symbols and shaded areas etc. used on the plans.
4. When the code offers multiple options, identify the specific option being proposed.
5. See notes/remarks made on one set of plans. Return marked set with new/revised sets after you have complied with the requirements on the marked set of plans. Red marks on plans are part of this comments list.

B. SITE REQUIREMENTS

1. **WILDLAND-URBAN INTERFACE SETBACK.** In areas designated as "wildland-urban interface" structures must be located at least 30 feet from nearest property line and open space easements unless the County Fire Marshal finds that terrain makes 30-foot setback impossible, or the parcel is in the interior of a group of homes with specifically designated and approved defensible space on the perimeter of the cluster. When parcels are adjacent a national forest, state park or open space preserve, buildings and structures must be located a minimum of 100 feet from the property line adjacent the protected area. (County Fire Code § 4907.1)
2. **FUEL MODIFICATION.** Note the following on the plot plan:

Maintain an effective fuel modification zone by removing, clearing or modifying combustible vegetation and other flammable materials from areas within 100 feet from buildings or structures. Fuel modification zones shall not extend beyond the property line. (County Fire Code § 4907.2)

The fuel modification zone is divided into two zones:

1. The first zone includes the area from the building to a point 50 feet away. This zone must be modified and planted with fire-resistive plants. Existing vegetation of less than 18 inches in height above the ground need not be removed where necessary to stabilize the soil and prevent erosion.
2. The second zone is the area between 50 to 100 feet from the building. In this zone the native vegetation may remain but it must be thinned by 50% and all dead and dying vegetation must be removed.

Fuel modification is also required along fire access roadways and driveways at distances prescribed in the County Fire Code. (County Fire Code § 4907.2.1)

This fire code section does NOT authorize clearing beyond property line.

Fuel modification must be complete prior to bringing combustible construction materials on-site.

3. **HYDRANTS.** Show fire hydrant location(s) on plot plan. In zones other than industrial, commercial and multi-family fire hydrants shall be installed in accordance with Table 507.5.1.1.1. (County Fire Code § 507.5.1.1.1)

TABLE 507.5.1.1.1 Distance Between Hydrants for Single Family Dwellings	
Parcels 2½ acres and larger:	Every 1,000 feet
Parcels ½ to 2½ acres:	Every 500 feet
Parcels less than ½ acre:	Every 350 feet

4. **WATER STORAGE TANKS.** An approved above ground water storage tank (5000 gal. capacity for structures less than 1500 sq. ft.; 10,000 gal. capacity for 1500 sq. ft. and above*) shall be installed per County of San Diego requirements prior to the storage of combustible materials on the site. On the plot plan show tank size, location and elevation, and hydrant (FDC) location and elevation. (See form **CFA #600 'Water Tank Standards for Fire Protection'**) (County Fire Code § 507.2.2) [*A greater capacity may be required for substantially larger structures.]
5. **PREMISES IDENTIFICATION.** Approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof or both. All new public roads, all private roads within major subdivisions, and all private road easements serving four or more parcels shall be named. Road name signs shall comply with County of San Diego Department of Public Works Design Standard #DS-13. The Fire Marshal may require the posting of a fire access roadway where parking has obstructed or could obstruct the required width. (County Fire Code § 503.3)
6. **EASEMENT ADDRESS SIGNS.** Show the phrase "easement address sign" on the plot plan where the easement intersects the named road. All easements which are not named differently from the roadway from which they originate shall have an address sign installed and maintained, listing all address numbers occurring on that easement, located where the easement intersects the named roadway. Minimum size of numbers on signs shall be 4 inches in height with a minimum stroke of ½", and shall contrast with the background. (County Fire Code § 505.3)
7. **ADDRESS NUMBERS.** On the plot plan show the phrase "address numbers" at the structure and at the driveway entrance. Approved numbers and/or addresses shall be placed on all new and existing buildings and at appropriate additional locations as to be plainly visible and legible from the street or roadway fronting the property from either direction of approach. The address numbers shall be a minimum of 4 inches in height with a ½" stroke, and shall contrast with the background. (County Fire Code § 505.1)
8. **FIRE APPARATUS ACCESS.** An all-weather fire access roadway is required. Show all portions of the fire access including roads, easements, and driveways. Plans for fire apparatus access roads or for their modification shall be submitted to the fire marshal for review and approval prior to construction or modification. Roads must be capable of supporting the imposed weight of fire apparatus (min. 50,000 lbs.) (County Fire Code § 503.2.3)
9. **DEAD ENDS.** Show and label an "emergency vehicle turnaround" on the plot plan within 150 feet of the terminal end. Fire apparatus access roads, including private driveways, more than 150 feet in length shall be provided with an approved means for turning the fire apparatus around. (See form **CFA #363 'Emergency Vehicle Turnaround'**) (County Fire Code § 503.2.5)
10. **DIMENSIONS.** Show improved road width and vertical clearance on plot plan. Fire apparatus access roads shall have an unobstructed improved width of not less than 24 feet. *Exception: single-family residential driveways serving no more than two single-family dwellings shall have a minimum of 16 feet of unobstructed improved width.* All fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches. (County Fire Code § 503.2.1)
11. **TURNING RADIUS.** Modify plans to meet or exceed minimum requirement. The turning radius of a fire apparatus access road shall be a minimum of 28 feet, or as approved by the Fire Marshal. (County Fire Code § 503.2.4)
12. **BRIDGES.** When a bridge is required to be used as part of a fire apparatus access road, it shall be constructed and maintained in accordance with standard AASHTO HB-17. (County Fire Code § 503.2.6)
13. **GRADE.** Show the fire access road grade (%) at representative locations on the plot plan. The grade of a fire apparatus access roadway shall not exceed 20.0%. (County Fire Code § 503.2.7)

14. **SURFACE.** Show the fire access road surface material type on the plot plan. Fire apparatus access roadways shall be designed and maintained to support the imposed loads of fire apparatus (not less than 50,000 lbs.) and shall provide all-weather driving capabilities. For driveways serving individual single-family dwellings the minimum surfacing materials required varies with the slope of the fire apparatus access road as follows:
(County Fire Code § 503.2.3.1)

MINIMUM SURFACE REQUIREMENTS

0-10% Slope	4" Decomposed Granite	(paving required in most jurisdictions)
11-14% Slope	2" Asphaltic Concrete	
15-20% Slope	3" Asphaltic Concrete or 3½" Portland Concrete with deep broom finish perpendicular to travel	

Paving and sub-base shall be installed to the standards specified in sections I-M of the "County of San Diego Off-Street Parking Design Manual".

15. **ROADWAY DESIGN FEATURES.** Roadway design features (speed bumps, speed humps, speed control dips, etc.) which may interfere with emergency responses shall not be installed on fire access roadways, unless they meet design criteria approved by the Fire Marshal. (County Fire Code § 503.4.1)
16. **GATES.** Submit detailed plans for gate or other obstruction. All gates or other structures or devices that could obstruct fire access roadways or otherwise hinder emergency operations are prohibited unless they meet standards, and receive specific plan approval from the Fire Marshal. (County Fire Code § 503.6)
17. **KEY BOXES.** Provide emergency access key box at approved location. Approved key boxes are required when access to or within a structure or an area is unduly difficult because of secured openings, or where immediate access is necessary for life-saving or firefighting purposes. (County Fire Code § 506.1)
18. **LOCATION OF ABOVE-GROUND LPG TANK.** Show the LPG tank size and location on the plot plan. The minimum separation between LPG containers and buildings, public ways, or lines of adjoining property that can be built upon is: 10 feet for containers 125 gallons to 500 gallons, 25 feet for containers 501 gallons to 2,000 gallons. (County Fire Code § 3804.3)

C. WILDLAND-URBAN INTERFACE – IGNITION-RESISTANT CONSTRUCTION IN HAZARDOUS FIRE AREAS

1. **WALLS:** Exterior wall surfaces shall be non-combustible (stucco, masonry, cement fiber board, etc.), ignition-resistant, heavy timber or log wall construction. Show on elevation sheet. (County Building Code § 92.1.707A.1)
2. **EAVES:** Eaves, soffits and fascias shall be constructed in conformance with guidance document DPLU #198. Provide eave details/Revise eave details accordingly. (County Building Code § 92.1.706A.3)
3. **UNENCLOSED UNDERFLOOR:** Underfloor areas shall be enclosed to the ground with non-combustible or ignition-resistant walls. Provide note on elevation sheet. (County Building Code § 92.1.709A.4.2.2)
4. **VENTS:** Vents are not permitted in overhang areas. Vents shall resist the intrusion of flames and embers or shall be protected by louvers and ⅛-inch non-combustible, corrosion-resistant metal mesh. Gable-end vents allowed if located minimum 12 inches below lowest eave/rake projection. Provide note on elevation sheet. (County Building Code § 92.1.706A.2)
5. **GLAZING:** Exterior windows, window walls, glazed doors, and glazed openings within doors shall be dual-glazed units with a minimum of one tempered pane **or** shall be glass block units **or** shall have a fire-resistance rating of not less than 20 minutes. Glazing frames made of vinyl shall have welded corners and metal reinforcement in the interlock area. Provide note on elevation sheet and window schedule. (County Building Code § 92.1.708A.2.1)
6. **SKYLIGHTS:** Skylights shall be tempered glass. Provide note on elevation sheet and window schedule. (County Building Code § 92.1.705A.5)
7. **ROOF GUTTERS:** Roof gutters shall be provided with the means to prevent the accumulation of leaves and debris in the gutter. Provide note on elevation sheet. (County Building Code § 92.1.705A.4)
8. **EXTERIOR DOORS:** Exterior doors shall be approved ignition-resistant construction, solid-core wood not less than 1⅜" thick, or have fire protection rating of not less than 20 minutes. Note on door schedule and elevation sheet. (County Building Code § 92.1.708A.3)

9. **DECKING AND OTHER BUILDING APPENDAGES:** Exterior balconies, carports, decks, patio covers, unenclosed roofs and floors and similar architectural appendages and projections shall be constructed as follows: (County Building Code § 92.1.709A.1)
- ✓ Non-combustible construction (such as concrete or metal).
 - ✓ Fire-retardant treated wood (pressure-treated with fire retardant, listed for exterior use, installed per listing).
 - ✓ Heavy timber construction (minimum dimensions 3x decking, 6x6 columns, 4x10 or 6x8 beams, 4x8 joists).
 - ✓ One-hour fire-resistive construction. The County will also accept decks with a non-combustible surface such as ceramic tiles, or a deck surface listed by an approved evaluation service as “one-hour” or as a Class “A” roof covering. All other exposed surfaces must be enclosed with ignition-resistant materials such as stucco or cement fiber material. There is no fire-resistive requirement for handrails and ballisters.
10. **FENCES AND OTHER ATTACHMENTS:** The first five feet of fences and other items attached to a structure shall be constructed on non-combustible material or meet the same fire-resistive standards as the exterior walls of the structure. Provide note on elevation sheet. (County Building Code § 92.1.712A).
11. **SPARK ARRESTERS.** Add the phrase “approved spark arrester” on chimney on elevation sheet. All structures having a chimney, flue, or stovepipe attached to a fireplace, stove, barbecue, or other solid or liquid fuel burning equipment or device shall have the chimney, flue, or stovepipe equipped with an approved spark arrester. Spark arresters shall be constructed of welded or woven wire mesh, 12 gauge thickness or larger, with openings no greater than ½”, or other material found satisfactory by the Fire Marshal. (County Fire Code § 603.6.6)

D. ROOFING REQUIREMENTS

1. **ROOFING.** Roofing shall have a minimum Class 'A' fire rating. For roof coverings where the profile allows a space between the roof covering and roof decking, the space at the eave ends shall be fire stopped to preclude entry of flames or embers. Show the phrase “Minimum Class “A” Roof Covering” on elevation sheet and provide a note specifying how fire-stopping will be done. (County Building Code § 1505)

E. FIRE PROTECTION SYSTEMS

1. **FIRE SPRINKLERS.** Note the following on the plot plan: (County Fire Code § 903.2)

“Structures shall have an automatic fire sprinkler system installed per NFPA 13 () standard and the County of San Diego Standards. Fire sprinkler system plans shall be submitted to and approved by the County of San Diego, and system shall be ready for hydrostatic testing prior to framing inspection.”
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2. **SMOKE ALARMS & CARBON MONOXIDE ALARMS.** Smoke alarms are required in each sleeping room, in the hallway/area accessing each sleeping area and on each level. In addition, carbon monoxide alarms are required in the hallway/area accessing each sleeping area and on each level. For new construction, alarms shall be permanently wired with battery back-up, and audible in all sleeping areas. Show smoke and carbon monoxide alarm locations on the floor plan or electrical plan. (County Fire & Building Codes § 907.2.10)

Available Resources

Link to County of San Diego Consolidated Fire Code - <http://www.sdcountry.ca.gov/pds/docs/cosd-fire-code.pdf>

Link to County of San Diego Adoptive Ordinance - http://www.sdcountry.ca.gov/pds/docs/amended_code_05-13-2011.pdf